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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Kalpana Kamath

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EXAMINER

PARVINI, PEGAH

ART UNIT

PAPER NUMBER

1793

NOTIFICATION DATE

DELIVERY MODE

10/15/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary	Application No. 10/814,079	Applicant(s) KAMATH ET AL.	
	Examiner PEGAH PARVINI	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-9, 11-13 and 21-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-9, 11-13 and 21-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 3, 2009 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-8, 11-13 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,468,493 to Chevallier et al. in view of U.S. Patent Application Publication No. 2003/0206864 to Mangin.

Regarding claim 4, Chevallier et al. teach porous silica particles or powders which are substantially spherical and preferably have an average size of at least 100

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microns, for example, 220 microns or 215 microns (Abstract; column 4, lines 32-37; column 9, line 45; column 10, lines 52-55).

The disclosure of “at least 100 microns” is taken to have overlapping ranges with the ranges instantly claimed specially since instant claim 4 recites “a diameter of from about 100 microns to about 3000 microns”; it should be noted that overlapping ranges have been held to establish *prima facie* obviousness. MPEP § 2144.05.

Chevallier et al. disclose pore volume of between 175A° and 275A° (i.e. about 17.5 nm to 27.5 nm). The reference, further, discloses pore diameter of less than or equal to 400A° (i.e. about 40 nm). It is to be noted that there is overlapping ranges of pore volume in the disclosed range with the one instantly claimed, and, again, overlapping ranges have been held to establish *prima facie* obviousness. MPEP § 2144.05.

Furthermore, Chevallier et al. disclose that the pore volume of the pores with a diameter of between 100 to 300 A° (i.e. about 10 to 300 nm) is at least 0.82 cm³/g; the reference, in an embodiment discloses that, for example, the pore volume represented by the pores of less than 400A° (i.e. about 40 nm) is about 1.03 cm³/g (column 7, lines 35-38; column 9, lines 30-45; column 10, lines 40-53; column 11, lines 45-60).

Chevallier et al. do not expressly disclose the suspension of said silica particles in a carrier fluid.

Mangin, drawn to embolic particle dispersions, contrast agents and compositions suitable for affecting embolization or occlusion of a vessel or a duct which particles, agents and compositions are visible under ultrasound, teach the use of a compatible

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carrier fluid in said composition with the embolic particles and agents (Abstract; [0017]) wherein the compatible carrier fluid may be saline ([0063]). Particularly, Mangin et al. disclose silica particles among the materials known in the art to be suitable embolic particles ([0015], [0026]) wherein the embolic particles comprise one or more voids ([0015]). Thus, although the reference may not literally disclose porous embolic particles, based on the disclosure above, it would have been obvious to have porous silica particles as the reference discloses silica particles as embolic particles wherein embolic particles have voids therein.

Furthermore, the reference makes it obvious that the choice of particle size is on the basis of the size of the vessel to be occluded, the desired duration of occlusion, the type of abnormality to be treated, and is substantially commensurate with the desired microbubble size of the gas which fills the voids to make the embolic particles visible by ultrasound ([0003], [0047]). Thus, Mangin provides proper motivation to modify the particle size to obtain the desired one based on the application of use. Finally, Mangin et al. disclose that the embolic particles may be of a wide variety of shapes such as spherical which is the most preferred shape ([0029]).

It would have been obvious to one of ordinary skill in the art to utilize the porous silica particles of Chevallier et al. in a composition comprising a contrast agent and a carrier fluid such as saline as that taught by Mangin motivated by the fact that it is known to use silica particles in compositions for affecting embolization as Mangin teaches that silica particles, with preferably spherical shape, with more than one voids therein are known in the art to be used in such compositions (Mangin, [0026]) wherein

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the size of said particles depends on a number of factors such as the size of the vessel to be occluded, the desired duration of occlusion, and the type of abnormality to be treated. Therefore, the use of porous silica particles in spherical shape is known in the art to be used in carrier fluids to be injected in the body with a contrast agent. The use of contrast agent, as known in the art and disclosed by Mangin, make is available to obtain ultrasound images of tissues and organs.

With further references to limitations drawn to tolerance of 10 nm or less on the mean pore diameter as recited in instant claim 4, it is to be noted that since the prior art disclose porous silica particles in spherical shapes which have a particle diameter of a range that has overlapping ranges with the ones instantly claimed and wherein said silica is also dispersed in a carrier fluid, the property or characteristic of a tolerance of about 10 nm or less on the mean pore diameter for 70% or more of the pore volume in the pore volume distribution is expected to follow from the composition of the references as combined absence clear evidence showing the contrary.

It should be noted that it is well settled that when a claimed composition appears to be substantially the same as a composition disclosed in the prior art, the burden is properly upon the applicant to prove by way of tangible evidence that the prior art composition does not necessarily possess characteristics attributed to the claimed composition. In re Spada, 911 F.2d 705, 15 USPQ2d 1655 (Fed. Circ. 1990); In re Fitzgerald, 619 F.2d 67, 205 USPQ 594 (CCPA 1980); In re Swinehart, 439 F.2d 2109, 169 USPQ 226 (CCPA 1971).

Regarding claims 5 and 6, Mangin reference is drawn to embolic particle dispersions, contrast agents and compositions suitable for affecting embolization or occlusion of a vessel or a duct which particles, agents and compositions are visible under ultrasound; said reference, also, teaches the use of a compatible carrier fluid in said composition with the embolic particles and agents (Abstract; [0017]) wherein the compatible carrier fluid may be saline ([0063]). Additionally, Mangin teaches that the embolic particles may be used in a combination with drugs or toxins or with chemotherapeutic agents to increase the therapeutic value of the composition ([0067]).

It is to be noted that although Mangin may not expressly and literally disclose the specific pore size and pore volume of silica particles, Mangin broadly discloses that it is known to use silica particles as embolic agents, and this is taken to include any and all silica particles absent evidence to the contrary and specially because of the disclosure of Mangin regarding the obviousness of modifying the particle size of embolic particles (i.e. silica particles) depending on a number of factors such as the size of the vessel to be occluded, the desired duration of occlusion, the type of abnormality to be treated, and is substantially commensurate with the desired microbubble size of the gas which fills the voids to make the embolic particles visible by ultrasound. Therefore, Mangin makes it obvious to modify the particle size of silica.

It is to be noted that instant claims 5 and 6 depend on claim 1 for which obviousness, based on Chevallier et al. in view of Mangin, has been established as detailed out above.

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Regarding claim 7, Chevallier et al. teach porous silica particles or powders which are substantially spherical and preferably have an average size of at least 100 microns; nevertheless, in some of the embodiments, the reference discloses particle size of 220 microns and 215 microns (Abstract; column 4, lines 32-37; column 9, line 45; column 10, lines 52-55). It is clear that these particle sizes are below 1500 microns; thus, said disclosure meets the limitation of instant claim 7.

Regarding claim 8, Chevallier et al. disclose pore diameter of less than or equal to 400Å (i.e. about 40 nm) (column 7, lines 19-22). It is to be noted that there is overlapping ranges of pore diameter with the one instantly claimed and overlapping ranges have been held to establish *prima facie* obviousness. MPEP § 2144.05.

Regarding claim 11, it is to be noted that since the prior art, as detailed above, disclose porous silica particles in spherical shapes which have a particle diameter of a range that has overlapping ranges with the one instantly claimed and wherein said silica is also dispersed in a carrier fluid such as saline, the property or characteristic of loss of attrition resistance of about 0.1% by weight or less is expected to follow from the composition of the references as combined absence clear evidence showing the contrary.

It should be noted that it is well settled that when a claimed composition appears to be substantially the same as a composition disclosed in the prior art, the burden is properly upon the applicant to prove by way of tangible evidence that the prior art

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composition does not necessarily possess characteristics attributed to the claimed composition. *In re Spada*, 911 F.2d 705, 15 USPQ2d 1655 (Fed. Circ. 1990); *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980); *In re Swinehart*, 439 F.2d 2109, 169 USPQ 226 (CCPA 1971).

Regarding claim 12, Mangin teaches that the therapeutic value of the composition of said reference which comprises embolic particles and contract agents may be augmented by its use in combination with drugs or toxins such as ricin or with chemotherapeutic agents such as methotrexate ([0067]).

Regarding claim 13, Mangin teaches that the embolic particles (i.e. silica particles) are immersed in a sterile physiological solution ([0063]); thus, this suggests that the silica particles are sterilized absence clear and specific evidence showing the contrary.

Regarding claim 24, Chevallier et al. teach porous silica particles or powders which are substantially spherical and preferably have an average size of at least 100 microns, for example, 220 microns or 215 microns (Abstract; column 4, lines 32-37; column 9, line 45; column 10, lines 52-55).

The disclosure of “at least 100 microns” is taken to have overlapping ranges with the ranges instantly claimed specially since instant claim 4 recites “a diameter of from

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about 100 microns to about 3000 microns”; it should be noted that overlapping ranges have been held to establish *prima facie* obviousness. MPEP § 2144.05.

Chevallier et al. do not expressly disclose the suspension of said silica particles in a carrier fluid.

Mangin, drawn to embolic particle dispersions, contrast agents and compositions suitable for affecting embolization or occlusion of a vessel or a duct which particles, agents and compositions are visible under ultrasound, teach the use of a compatible carrier fluid in said composition with the embolic particles and agents (Abstract; [0017]) wherein the compatible carrier fluid may be saline ([0063]). Particularly, Mangin et al. disclose silica particles among the materials known in the art to be suitable embolic particles ([0015], [0026]) wherein the embolic particles comprise one or more voids ([0015]). Thus, although the reference may not literally disclose porous embolic particles, based on the disclosure above, it would have been obvious to have porous silica particles as the reference discloses silica particles as embolic particles wherein embolic particles have voids therein.

Furthermore, the reference makes it obvious that the choice of particle size is on the basis of the size of the vessel to be occluded, the desired duration of occlusion, the type of abnormality to be treated, and is substantially commensurate with the desired microbubble size of the gas which fills the voids to make the embolic particles visible by ultrasound ([0003], [0047]). Thus, Mangin provides proper motivation to modify the particle size to obtain the desired one based on the application of use. Finally, Mangin

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et al. disclose that the embolic particles may be of a wide variety of shapes such as spherical which is the most preferred shape ([0029]).

It would have been obvious to one of ordinary skill in the art to utilize the porous silica particles of Chevallier et al. in a composition comprising a contrast agent and a carrier fluid as that taught by Mangin motivated by the fact that it is known to use silica particles in compositions for affecting embolization as Mangin teaches that silica particles, with preferably spherical shape, with more than one voids therein are known in the art to be used in such compositions (Mangin, [0026]) wherein the size of said particles depends on a number of factors such as the size of the vessel to be occluded, the desired duration of occlusion, and the type of abnormality to be treated. Therefore, the use of porous silica particles in spherical shape is known in the art to be used in carrier fluids to be injected in the body with a contrast agent. The use of contrast agent, as known in the art and disclosed by Mangin, make is available to obtain ultrasound images of tissues and organs.

With further references to limitations drawn to tolerance of 10 nm or less on the mean pore diameter as recited in instant claim 24, it is to be noted that since the prior art disclose porous silica particles in spherical shapes which have a particle diameter of a range that has overlapping ranges with the ones instantly claimed and wherein said silica is also dispersed in a carrier fluid, the property or characteristic of a tolerance of about 10 nm or less on the mean pore diameter for 70% or more of the pore volume in the pore volume distribution is expected to follow from the composition of the references as combined absence clear evidence showing the contrary.

It should be noted that it is well settled that when a claimed composition appears to be substantially the same as a composition disclosed in the prior art, the burden is properly upon the applicant to prove by way of tangible evidence that the prior art composition does not necessarily possess characteristics attributed to the claimed composition. *In re Spada*, 911 F.2d 705, 15 USPQ2d 1655 (Fed. Circ. 1990); *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980); *In re Swinehart*, 439 F.2d 2109, 169 USPQ 226 (CCPA 1971).

Regarding claim 25, it is to be noted that, as detailed out above, the prior art disclose porous silica particles in spherical shapes which have a particle diameter of a range that has overlapping ranges with the ones instantly claimed and wherein said silica is also dispersed in a carrier fluid; thus, the property of loss of attrition resistance of the silica particles is assumed to be characteristics followed from the composition of the claims absence clear evidence showing the contrary. It should be noted that it is well settled that when a claimed composition appears to be substantially the same as a composition disclosed in the prior art, the burden is properly upon the applicant to prove by way of tangible evidence that the prior art composition does not necessarily possess characteristics attributed to the CLAIMED composition. *In re Spada*, 911 F.2d 705, 15 USPQ2d 1655 (Fed. Circ. 1990); *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980); *In re Swinehart*, 439 F.2d 2109, 169 USPQ 226 (CCPA 1971).

Claims 4, 9 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,482,324 to Kirkland et al. in view of Mangin.

Regarding claims 4, 9 and 21, Kirkland et al. disclose porous microspheres of silica, generally spherical in shape, having a size of 10 microns to 200 microns which are contained in a reaction medium (i.e. carrier fluid); furthermore, the reference discloses that the porous silica microspheres have a density of at least 1.2 g/cc (Abstract; column 4, lines 57-63; column 10, lines 48-55, claims 1-2). The reference, further, discloses that porosity is from about 50% to about 65% (column 5, lines 1-5); this is seen to have overlapping ranges with the instantly claimed pore volume when converted to ml/g absence clear evidence showing the contrary. With reference to density and particle size, it is to be noted that overlapping ranges have been held to establish *prima facie* obviousness. MPEP § 2144.05.

The property or characteristic of a tolerance of about 10 nm or less on the mean pore diameter for 70% or more of the pore volume in the pore volume distribution is expected to follow from the composition of the references as combined absence clear evidence showing the contrary specially in view of the fact that the prior art disclose porous silica particles in spherical shapes which have a particle diameter of a range that has overlapping ranges with the ones instantly claimed.

Although Kirkland et al. do not expressly disclose the use of saline as a carrier fluid, it would have been obvious to a person of ordinary skill in the art to have utilized saline as the carrier fluid used in which porous silica microspheres of the size of 200

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microns are dispersed as that taught by Mangin motivated by the fact that Mangin clearly disclose that the use of silica particles of spherical shape which have voids (i.e. porous) as embolic agent in therapeutic compositions comprising embolic agents such as silica is known wherein the composition comprises a suitable carrier fluid such as a sterile physiological solution such as saline (Mangin [0037], [0047], [0050], [0054], and [0063]). In other words, Mangin make is apparent that porous microspheres of silica have been known to be used as embolic agents in saline solutions for therapeutic purposes.

Regarding claim 22, with reference to the limitation drawn to tolerance of 10 nm or less on the mean pore diameter as recited in instant claim 22, it is to be noted that since the prior art disclose porous silica particles in spherical shapes which have a particle diameter of a range that has overlapping ranges with the ones instantly claimed and wherein said silica is also dispersed in a carrier fluid, the property or characteristic of a tolerance of about 10 nm or less on the mean pore diameter for 70% or more of the pore volume in the pore volume distribution is expected to follow from the composition of the references as combined absence clear evidence showing the contrary.

It should be noted that it is well settled that when a claimed composition appears to be substantially the same as a composition disclosed in the prior art, the burden is properly upon the applicant to prove by way of tangible evidence that the prior art composition does not necessarily possess characteristics attributed to the CLAIMED composition. In re Spada, 911 F.2d 705, 15 USPQ2d 1655 (Fed. Circ. 1990); In re

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Fitzgerald, 619 F.2d 67, 205 USPQ 594 (CCPA 1980); In re Swinehart, 439 F.2d 2109, 169 USPQ 226 (CCPA 1971).

Regarding claim 23, it is to be noted that, as detailed out above, Kirkland et al. disclose porous silica particles in spherical shapes which have a particle diameter of a range that has overlapping ranges with the one instantly claimed and wherein said silica is also contained in a medium (i.e. carrier fluid); thus, the property of loss of attrition resistance of the silica particles is assumed to be a characteristic followed from the composition of the claims absence clear evidence showing the contrary.

It should be noted that it is well settled that when a claimed composition appears to be substantially the same as a composition disclosed in the prior art, the burden is properly upon the applicant to prove by way of tangible evidence that the prior art composition does not necessarily possess characteristics attributed to the CLAIMED composition. In re Spada, 911 F.2d 705, 15 USPQ2d 1655 (Fed. Circ. 1990); In re Fitzgerald, 619 F.2d 67, 205 USPQ 594 (CCPA 1980); In re Swinehart, 439 F.2d 2109, 169 USPQ 226 (CCPA 1971).

Response to Amendment

Applicants' amendment to claims 4 and 21, filed June 12, 2009, pages 2 and 4, is acknowledged. However, said amendment does not place the application in condition for allowance as detailed out above and explained below.

Response to Arguments

Applicants' arguments filed June 12, 2009 (RCE filed August 3, 2009) have been fully considered but they are not persuasive.

With reference to Applicants' argument regarding the combination of Chevallier et al. in view of Mangin, the Examiner disagrees with Applicants' remark that Chevallier et al. is not reasonably pertinent to the problem with which Mangin is concerned. The Examiner, respectfully, submits that Mangin teaches the use of "fine" silica particles as embolic agents wherein the particles have voids (i.e. pores) while they are dispersed in a carrier fluid. Chevallier et al., as detailed previously, teach a detailed disclosure on silica particles. Considering the fact that proper motivation was detailed out on the combination of the two references, and the two are drawn to silica particles which, as a combination, would meet the recited limitations, and finally, based on the fact that Mangin clearly discloses the use of fine silica particles as embolic particles, it is seen that the combination is proper.

Applicants have not presented any tangible evidence on why the combination of the two references cannot reach the invention as claimed; specifically, Applicants have not presented any tangible evidence on why the silica of Chevallier et al. cannot be used as embolic particles in the composition of Mangin even though Mangin clearly teaches the use of fine silica particles in said invention. It should be noted that Mangin also suggest modifying particle size by disclosing that the size of said particles depends on a number of factors such as the size of the vessel to be occluded, the desired

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duration of occlusion, and the type of abnormality to be treated. While Chevallier et al. disclose the porous microspheres of silica as detailed above which would meet the limitations regarding the pore size and pore volume and particle size, it is apparent that the use of said silica particles as embolic agents in therapeutic compositions is obvious motivated by the fact that Mangin clearly teaches the use of silica particles, whose size may be modified as detailed above, to obtain the invention as claimed absent clear evidence to the contrary. It is, further, noted that arguments cannot take the place of evidence. See MPEP 2145. Although Mangin may not literally disclose all the detailed limitations of the recited claims, said reference discloses the use of "fine" silica particles, and this is seen to broadly include any and all silica particles specially considering the fact that Chevallier et al., in fact, disclose the pore size, pore volume and particle size of silica particles. It is specially noted that Mangin makes it clear that the choice of particle size is on the basis of the size of the vessel to be occluded, the desired duration of occlusion, the type of abnormality to be treated, and the desired microbubble size of the gas which fills the voids to make the embolic particles visible by ultrasound; in other words, Mangin makes the choice of particle size obvious. Also, Mangin makes the choice of particle shape obvious and in fact, discloses the spherical shape as the most preferred one.

In conclusion, based on Mangin, it is known and obvious to have utilized silica particles having voids, and special size depending on many factors as those recited above, and spherical shape as embolic particles. The fact that Mangin may not expressly disclose the specific particle size and other characteristics of the specific

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silica particles recited in instant claims does not constitute that the particles of Chevallier et al. may not be used in Mangin, specially based on the broad disclosure of Mangin on the use of silica particles used as embolic particles.

With reference to Applicants' argument that the Examiner has the burden of showing that Chevallier et al. inherently disclose particles with the tolerance required by the claims, it is to be noted that the rejection is based on a 103(a) obviousness over a combination of references and not only based on Chevallier et al. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Furthermore, since the combination of references discloses the limitation of the silica particles in terms of shape, size, porosity and the usage, certain characteristics such as tolerance level of the particles based on their pore volume distribution is expected to follow from the silica particles of the combination of references absence evidence showing the contrary.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PEGAH PARVINI whose telephone number is (571)272-2639. The examiner can normally be reached on Monday to Friday 8:00am-4:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Pegah Parvini/
Examiner, Art Unit 1793

/J.A. LORENZO/
Supervisory Patent Examiner, Art
Unit 1793